Australian Bureau of Statistics

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Summary

Executive Summary

EXECUTIVE SUMMARY

This study uses a prototype linked employer-employee database (LEED) to analyse both employee and firm characteristics to identify factors that explain differences in labour productivity across firms and industries. We created the prototype LEED by linking de-identified individual Personal Income Tax and Business Tax data from the Australian Taxation Office with the Australian Bureau of Statistics Business Longitudinal Database (BLD), for the 2010–11 financial year.

We demonstrate the analytical potential of the prototype LEED by constructing multilevel models (two and three-level) to describe employer and employee characteristics of productive firms. We caution readers not to draw any causal conclusions from the analysis because the purpose was descriptive analysis only. This paper has demonstrated the importance of considering both firm and employee dynamics in the analysis of labour productivity.

Our two- and three- level results are broadly consistent. We have found that investment is significantly negative at the industry level but positive at the firm level. Our model results suggest that hours worked may prove a better proxy for labour productivity. We found that age and experience are relevant to explaining firm-level productivity, and our results also indicate that it may be useful to consider job tenure to measure experience. Finally, there are mixed results with the occupation variables - our proxy for skills. Measures of education attainment might provide a better proxy. Therefore, we conclude that it would be useful to supplement the prototype LEED with key variables such as hours worked, firm-level capital stock and education attainment.

We have also extended the study to consider the impact of multiple job holders in the models. The three level model results are similar after we have taken these multiple job holders into account. One of the reasons is that the prevalence of multiple job holders is low (less than 1%) in this prototype LEED. However, this should be considered in the model as it could become an important estimation issue in larger samples.

We conclude that the LEED is a powerful database with many possible analytical uses.

About this Release

This study uses a prototype linked employer-employee database (LEED) to analyse both employee and firm characteristics to identify factors that explain differences in labour productivity across firms and industries. We created the prototype LEED by linking de-identified individual Personal Income Tax and Business Tax data from the Australian Taxation Office (ATO) with the Australian Bureau of Statistics (ABS) Business Longitudinal Database (BLD), for the 2010–11 financial year. We demonstrate the analytical potential of the prototype LEED by constructing multilevel models to describe employer and employee characteristics of productive firms. The hierarchical structure of the prototype LEED lends itself to using multilevel models to capture the dynamics between firms and employees. A LEED is a rich database that provides a great opportunity for further labour and productivity research. We have proposed some key areas to further develop this preliminary research.